

I. GENERAL  
THIS PROJECT INVOLVES APS/CPS UPGRADES.

1. THE INTERSECTION IS TO OPERATE IN A NEMA 6-PHASE, FULLY-ACTUATED MODE.

1. FOR FINAL PAVEMENT MARKINGS, REFER TO THE PAVEMENT MARKING PLANS, AS APPLICABLE; OTHER THAN THOSE DETAILED ON THE PLAN. ALL PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH ADMINISTRATION STANDARDS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
3. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS. HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN THE APPROPRIATE 800 SERIES STANDARD PLATES. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
4. ALL UNDERGROUND AND OVERHEAD UTILITIES SHOWN ON THESE PLANS ARE SCHEMATIC ONLY AND MAY NOT BE COMPLETE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING MISS UTILITY PRIOR TO CONSTRUCTION SO THAT ALL UTILITIES MAY BE LOCATED IN THE FIELD. IF THE CONTRACTOR PERCEIVES THAT A CONFLICT BETWEEN THE UTILITIES AND THE TRAFFIC SIGNAL WILL OCCUR, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IMMEDIATELY SO THAT THE CONFLICT MAY BE RESOLVED.
5. THE CONTRACTOR SHALL MAINTAIN THE CONTINUOUS OPERATION OF ALL INTERCONNECT, VEHICULAR, PEDESTRIAN DETECTORS, AND LIGHTING DEVICES. IF ANY DEVICE IS DAMAGED BY THE CONTRACTOR, IT SHALL BE REPAIRED WITHIN 72 HOURS BY THE CONTRACTOR AT NO COST TO THE ADMINISTRATION AFTER NOTIFICATION BY THE ENGINEER.
6. APS WILL FUNCTION AS FOLLOWS:
  - A. TO CROSS GEORGIA
    - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS GEORGIA AT ASPEN HILL."
    - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
  - TO CROSS ASPEN HILL
    - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS ASPEN HILL AT GEORGIA."
    - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
  - TO CROSS DRIVEWAY
    - A. WHEN PEDESTRIAN LOCATES AND PRESSES PUSHBUTTON FOR AN EXTENDED TIME, THE PUSHBUTTON UNIT WILL BE "WAIT TO CROSS DRIVEWAY AT GEORGIA."
    - B. WHEN WALK PHASE BEGINS, THE MESSAGE WILL BE A RAPID TICK WHICH WILL LAST FOR THE DURATION OF THE WALK PHASE.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR REACHING LESS THAN 18" FROM A 60" X 60" LEVEL LANDING AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
9. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
10. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E.2 AND THE NCHRP 11-23 LOCATION PRACTICES FOR PEDESTRIAN SIGNALS; GUIDE TO BEST PRACTICES FOR NCHRP 11-23. THE CONTRACTOR IS TO STOP WORK ON PUSHBUTTON LOCATIONS UNTIL DESIGN MATTER IS OBTAINED, APPROVED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
11. FOR THE EXISTING CONDUITS THAT ARE TO BE USED, THE CONTRACTOR SHALL REMOVE ALL INOPERABLE/UNUSED WIRES/CABLES. IF NECESSARY, THESE WIRES/CABLES SHALL BE REMOVED FROM CONDUITS NOT LABELED "USE EXISTING CONDUIT" IN ORDER TO COMPLETELY REMOVE THEM FROM THE CONDUIT SYSTEM HANDBOXES AND SIGNAL CABINET. NOTE THAT THIS WORK SHALL BE INCIDENTAL TO THE "REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT" ITEM.

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ASSISTANT DISTRICT ENGINEER - TRAFFIC  
301-513-7318

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ASSISTANT DISTRICT ENGINEER - CONSTRUCTION  
301-513-7336

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ASSISTANT DISTRICT ENGINEER - MAINTENANCE  
301-513-7304

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MR. RICHARD DAFF SR.  
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410-787-7630

MR. ED RODENHIZER  
TEAM LEADER SIGNAL OPERATIONS  
410-787-7650

MR. EUGENE BAILEY  
TEAM LEADER SIGN OPERATIONS  
410-787-7670

MS. DARLENE EIDE  
SUPPLY OFFICER IV (SIGNAL SHOP WAREHOUSE)  
410-787-7668

MR. KEITH LORD  
301-279-1971

MR. KAMAL HAMUD  
TRAFFIC ENGINEER - MCTMC  
240-777-8761

A. EQUIPMENT TO BE FURNISHED BY STATE HIGHWAY ADMINISTRATION

| CAT<br>CODE NO. | DESCRIPTION  | UNITS | QUANTITY |
|-----------------|--|-------|----------|
| 973023          | FLAT SHEET ALUMINUM SIGNS CONSISTING OF:                                       | SF    | 6        |
|                 | R10-3(1) (9"x15") POLE MOUNT<br>SIGN TO READ "PUSH BUTTON TO CROSS GEORGIA"    | EA    | 2        |
|                 | R10-3(1) (9"x15") POLE MOUNT<br>SIGN TO READ "PUSH BUTTON TO CROSS ASPEN HILL" | EA    | 2        |
|                 | R10-3(1) (9"x15") POLE MOUNT<br>SIGN TO READ "PUSH BUTTON TO CROSS DRIVEWAY"   | EA    | 2        |

| CAT CODE | UNITS | QUANTITY | DESCRIPTION |
|----------|-------|----------|-------------|
|----------|-------|----------|-------------|

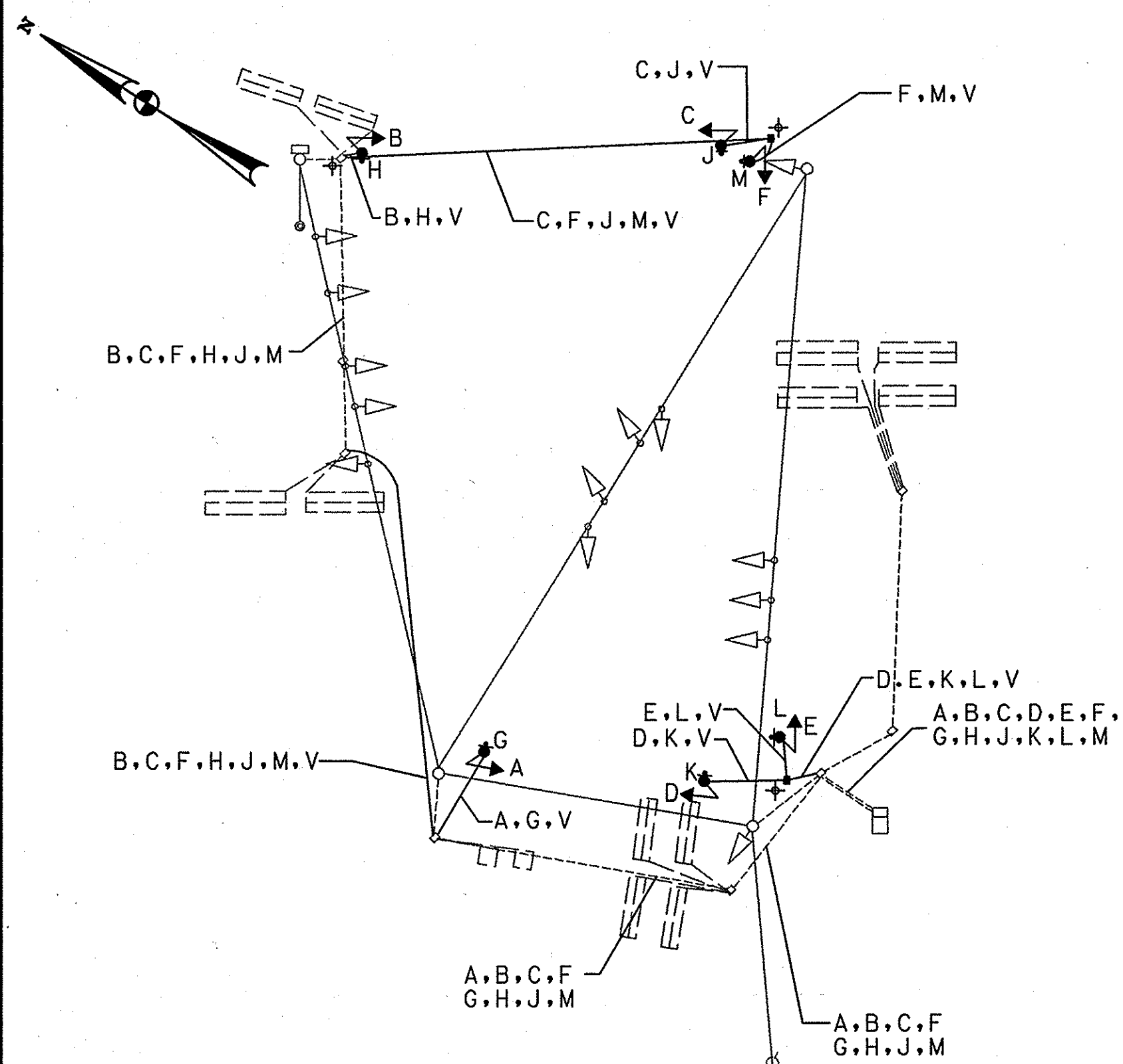
|        |    |      |  |
|--------|----|------|--|
| 203030 | CY | 3    | TEST PIT EXCAVATION  |
| 585621 | LF | 550  | 12 INCH WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING               |
| 585625 | LF | 125  | 24 INCH WHITE PERMANENT PREFORMED THERMO. PAVEMENT MARKING               |
| 800000 | EA | 6    | 16 INCH LED COUNTDOWN PEDESTRIAN SIGNAL HEAD SECTION PEDESTAL POLE MOUNT |
| 800000 | EA | 1    | 2-WIRE CENTRAL CONTROL UNIT  |
| 800000 | EA | 6    | AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON STATION                           |
| 800000 | LS | 1    | REMOVE AND DISPOSE OF EXISTING MATERIAL AND EQUIPMENT                    |
| 801004 | CY | 4    | CONCRETE FOR SIGNAL FOUNDATIONS  |
| 801104 | LF | 47   | WOOD SIGN SUPPORTS 4 INCH X 4 INCH                                       |
| 801605 | SF | 17   | SHEET ALUMINUM SIGNS   |
| 802501 | LF | 350  | NO. 6 AWG STRANDED BARE COPPER GROUND WIRE                               |
| 805135 | LF | 140  | 3 INCH SCHEDULE 80 PVC CONDUIT - TRENCHED                                |
| 805155 | LF | 280  | 4 INCH SCHEDULE 80 PVC CONDUIT - SLOTTED                                 |
| 811001 | EA | 2    | FURRISH AND INSTALL ELECTRICAL HANDHOLE                                  |
| 813023 | SF | 5    | RELOCATE EXISTING GROUND MOUNTED SIGN                                    |
| 861105 | LF | 1435 | ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 A.W.G.)                           |
| 861107 | LF | 1450 | ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 A.W.G.)                           |
| 837001 | EA | 3    | GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH                          |
| 818004 | EA | 6    | 10 FOOT BREAKAWAY PEDESTAL POLE  |

THE CONTRACTOR SHALL DELIVER AUDIBLE TACTILE PEDESTRIAN PUSHBUTTON STATION AND BASE UNIT TO KEITH LORR AT THE MONTGOMERY COUNTY SIGNAL SHOP PRIOR TO LOCATION INSTALLATION FOR PROGRAMMING. SHA FORCES SHALL INSTALL AUDIBLE TACTILE PEDESTRIAN PUSH BUTTON BASE UNIT IN THE CABINET.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

|                    |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |  |
|--------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| PHASE 1 AND 5      | <G   | <G   | R    | R    | <G   | <G   | R    | R    | R    | R    | R    | R    | R/G> | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| 1 AND 5 CHANGE     | <Y   | <Y   | R    | R    | <Y   | <Y   | R    | R    | R    | R    | R    | R    | R/Y> | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 1 AND 6      | <G   | <G   | G    | G    | <R   | <R   | R    | R    | R    | R    | R    | R    | R/G> | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| 1 AND 6 CHANGE     | <Y   | <Y   | G    | G    | <R   | <R   | R    | R    | R    | R    | R    | R    | R/Y> | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 2 AND 5      | <R   | <R   | R    | R    | <G   | <G   | G    | G    | R    | R    | R    | R    | R    | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| 2 AND 5 CHANGE     | <R   | <R   | R    | R    | <Y   | <Y   | G    | G    | R    | R    | R    | R    | R    | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 2 AND 6      | <R   | <R   | G    | G    | <R   | <R   | G    | G    | R    | R    | R    | R    | R    | R    | W    | W    | W    | W    | DW   | DW   |  |
| PED. CLEARANCE     | <R   | <R   | G    | G    | <R   | <R   | G    | G    | R    | R    | R    | R    | R    | R    | FLDW | FLDW | FLDW | FLDW | DW   | DW   |  |
| 2 AND 6 CHANGE     | <R   | <R   | Y    | Y    | <R   | <R   | Y    | Y    | R    | R    | R    | R    | R    | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 3            | <R   | <R   | R    | R    | <R   | <R   | R    | R    | G    | G    | G    | R    | R    | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| 3 CHANGE           | <R   | <R   | R    | R    | <R   | <R   | R    | R    | Y    | Y    | Y    | R    | R    | R    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 4            | <R   | <R   | R    | R    | <R   | <R   | R    | R    | R    | R    | R    | G    | G    | G    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| 4 CHANGE           | <R   | <R   | R    | R    | <R   | <R   | R    | R    | R    | R    | R    | Y    | Y    | Y    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| PHASE 4 ALT.       | <R   | <R   | R    | R    | <R   | <R   | R    | R    | R    | R    | R    | G    | G    | G    | DW   | DW   | DW   | DW   | W    | W    |  |
| PED. CLEARANCE     | <R   | <R   | R    | R    | <R   | <R   | R    | R    | R    | R    | R    | G    | G    | G    | DW   | DW   | DW   | DW   | FLDW | FLDW |  |
| 4 ALT. CHANGE      | <R   | <R   | R    | R    | R    | <R   | R    | R    | R    | R    | R    | Y    | Y    | Y    | DW   | DW   | DW   | DW   | DW   | DW   |  |
| FLASHING OPERATION | FL/R | FL/R | FL/Y | FL/Y | FL/R | FL/R | FL/Y | FL/Y | FL/R | FL/R | FL/R | FL/R | FL/R | FL/R | DARK | DARK | DARK | DARK | DARK | DARK |  |

KEY



A,B,C, } 5 CONDUCTOR ELECTRICAL CABLE  
D,E,F }

G,H,J, } 2 CONDUCTOR ELECTRICAL CABLE  
K,L,M } (NO. 14 AWG)

v} 1 CONDUCTOR (NO. 6 AWG) BARE  
STRANDED COPPER GROUND WIRE

GROUND ROD



STATE OF MARYLAND  
DEPARTMENT OF TRANSPORTATION  
STATE HIGHWAY ADMINISTRATION

OFFICE OF TRAFFIC & SAFETY  
TRAFFIC ENGINEERING DESIGN DIVISION

MD 97 (GEORGIA AVENUE)  
AND ASPEN HILL ROAD

ASPEN HILL, MARYLAND

## GENERAL INFORMATION PLAN

SCALE N.T.S. DATE 9-2-2008 CONTRACT NO. MO5325133

DESIGNED BY J.PALADUGU COUNTY MONTGOMERY

DRAWN BY J. PALADUGU LOGMILE 15009706.75

CHECKED BY K. BINIKER T.I.M.S. NO. J203

|        |        |
|--------|--------|
| FAP NO | TOD NO |
|--------|--------|

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TS NO. **32 G** | DRAWING **PSG** OF **N002** | SHEET NO. **4** OF **4**

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